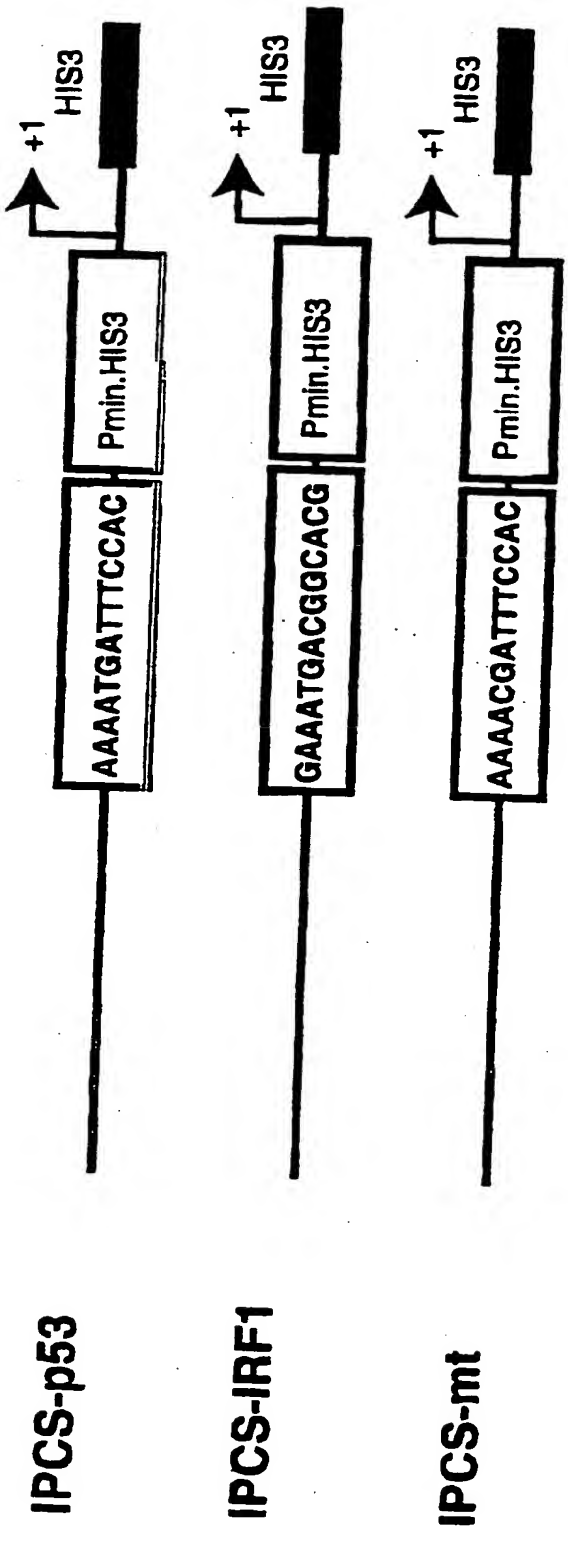
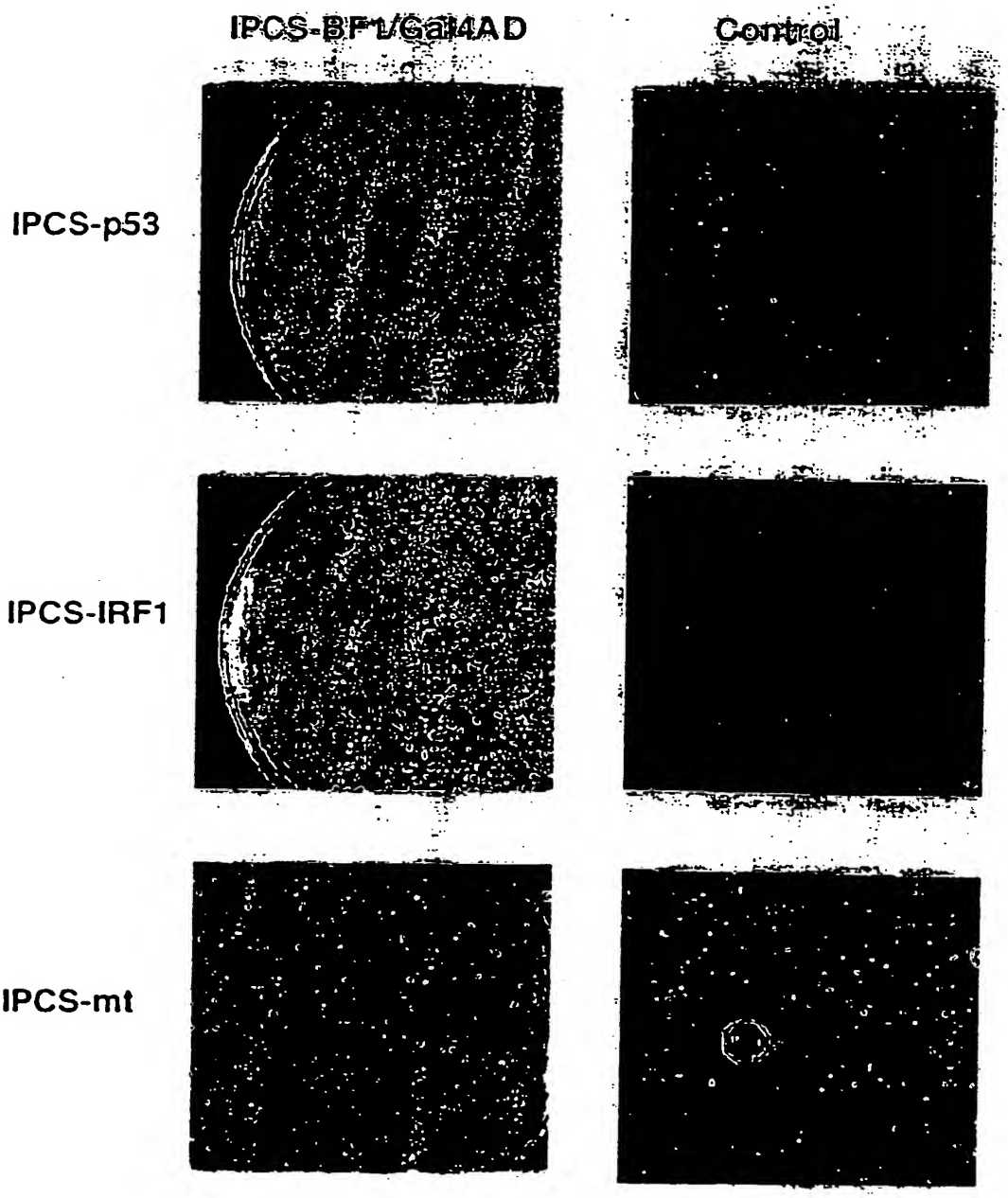

IPCS reporter constructs
+1
HIS3
Pmin.HIS3
AAAATGATTTCCAC
GAAATGACGGCACG
AAAACGATTTCCAC
IPCS-p53
IPCS-IRF1
IPCS-mt

Figure 1A

BEST AVAILABLE COPY

Figure 1B



EPO - DG 1

11. 10. 2002

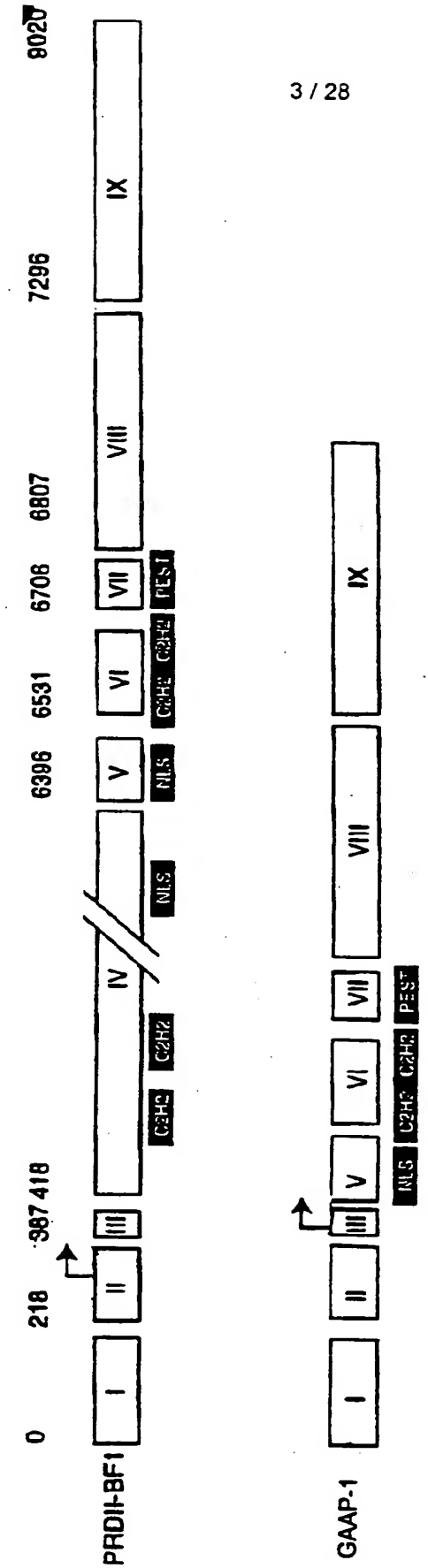

0
218
387 418
6396
6531
6706
6807
7296
8020
PRDII-BF1
GAAP-1
I
II
III
IV
V
VI
VII
VIII
IX
C2HC
C2H2
NLS
PEST

Figure 2A

BEST AVAILABLE COPY

Figure 3

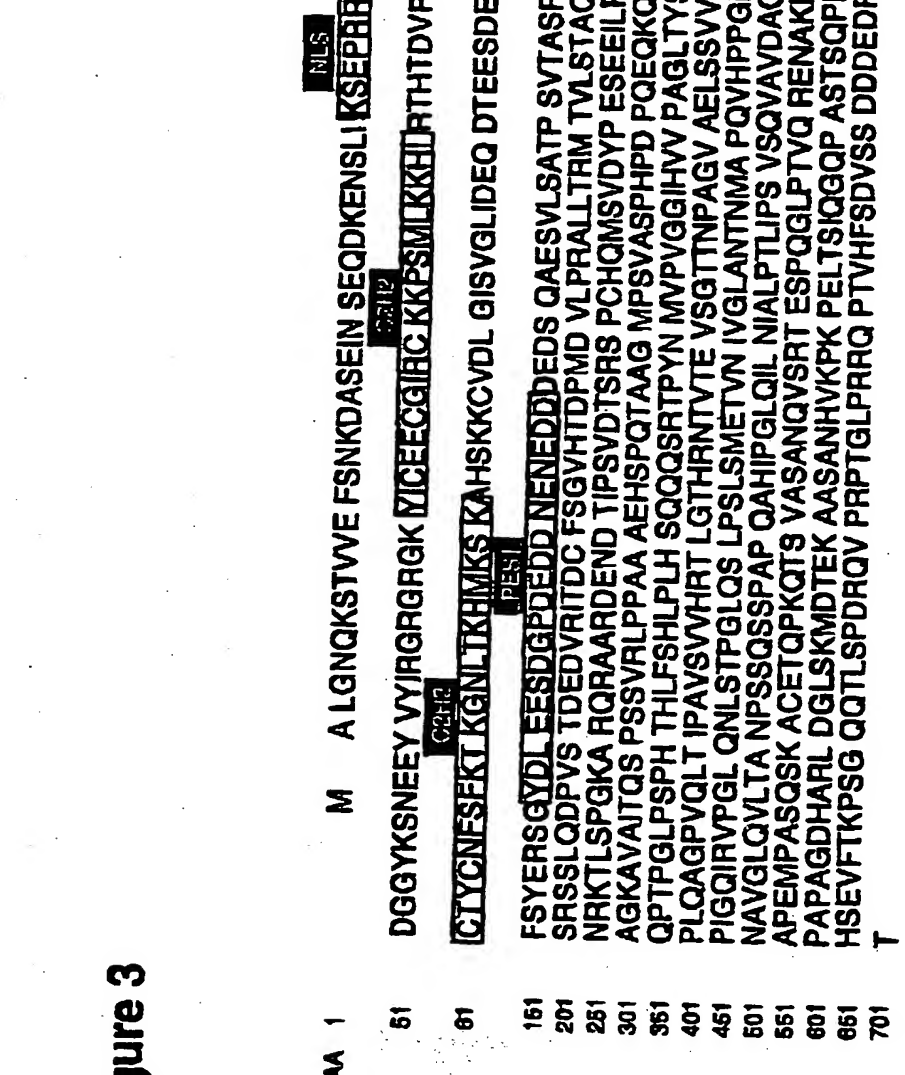
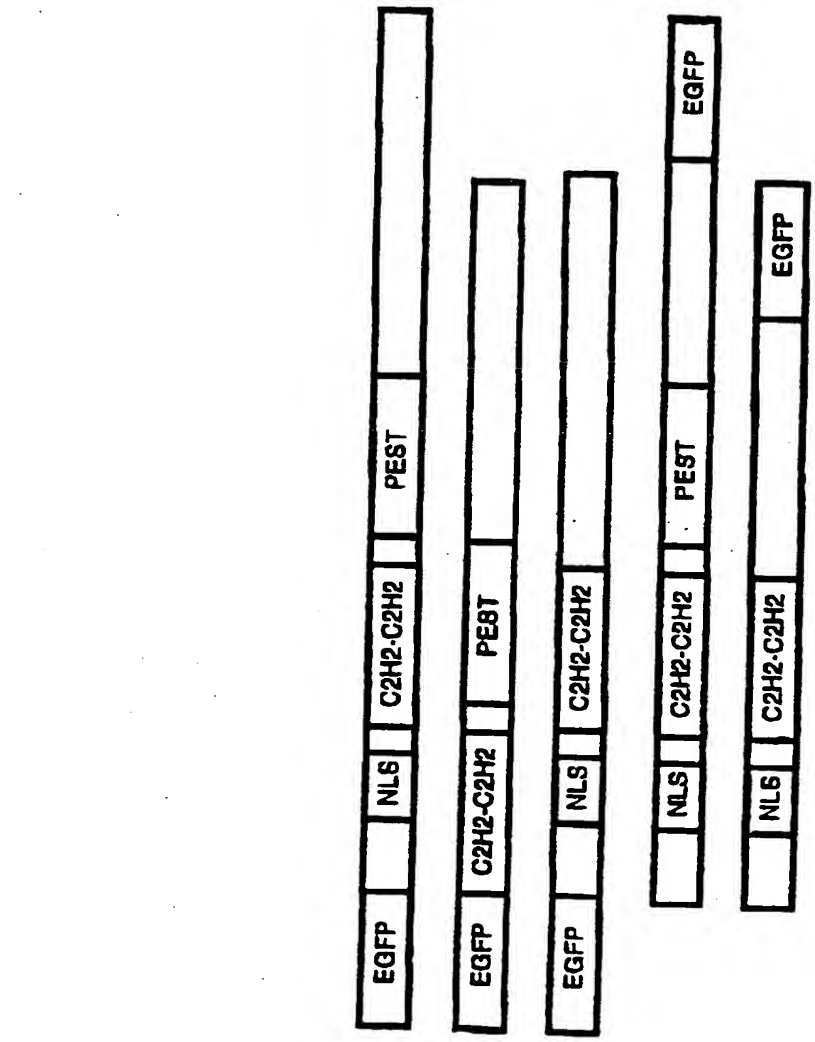


Figure 4A


EGFP/GAAP-1
EGFP/GAAP-1 NLS
EGFP/GAAP-1 PEST
GAAP-1 /EGFP
GAAP-1 /EGFP PEST
EGFP
NLS
C2H2-C2H2
PEST

BEST AVAILABLE COPY

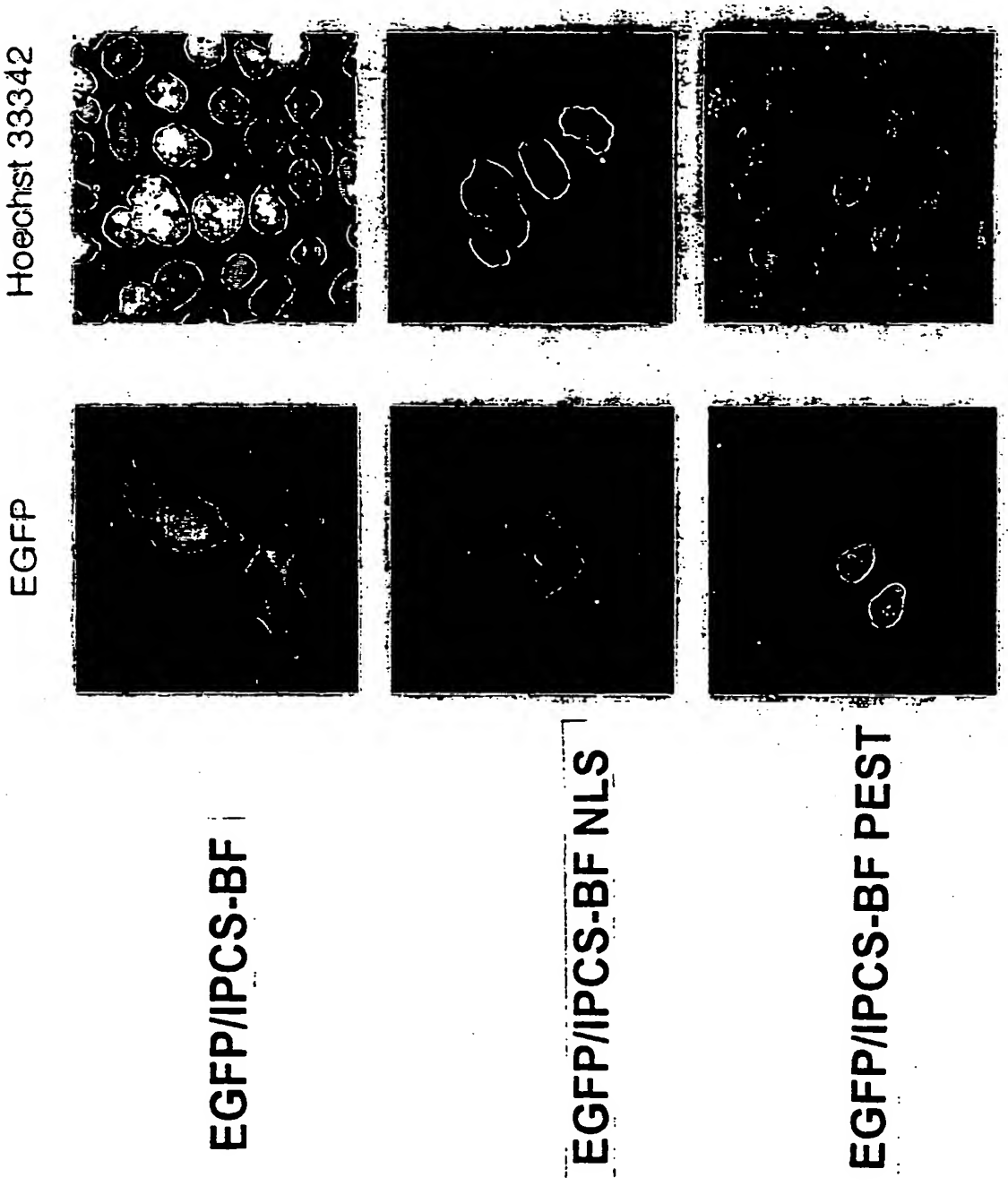


Figure 4B

BEST AVAILABLE COPY

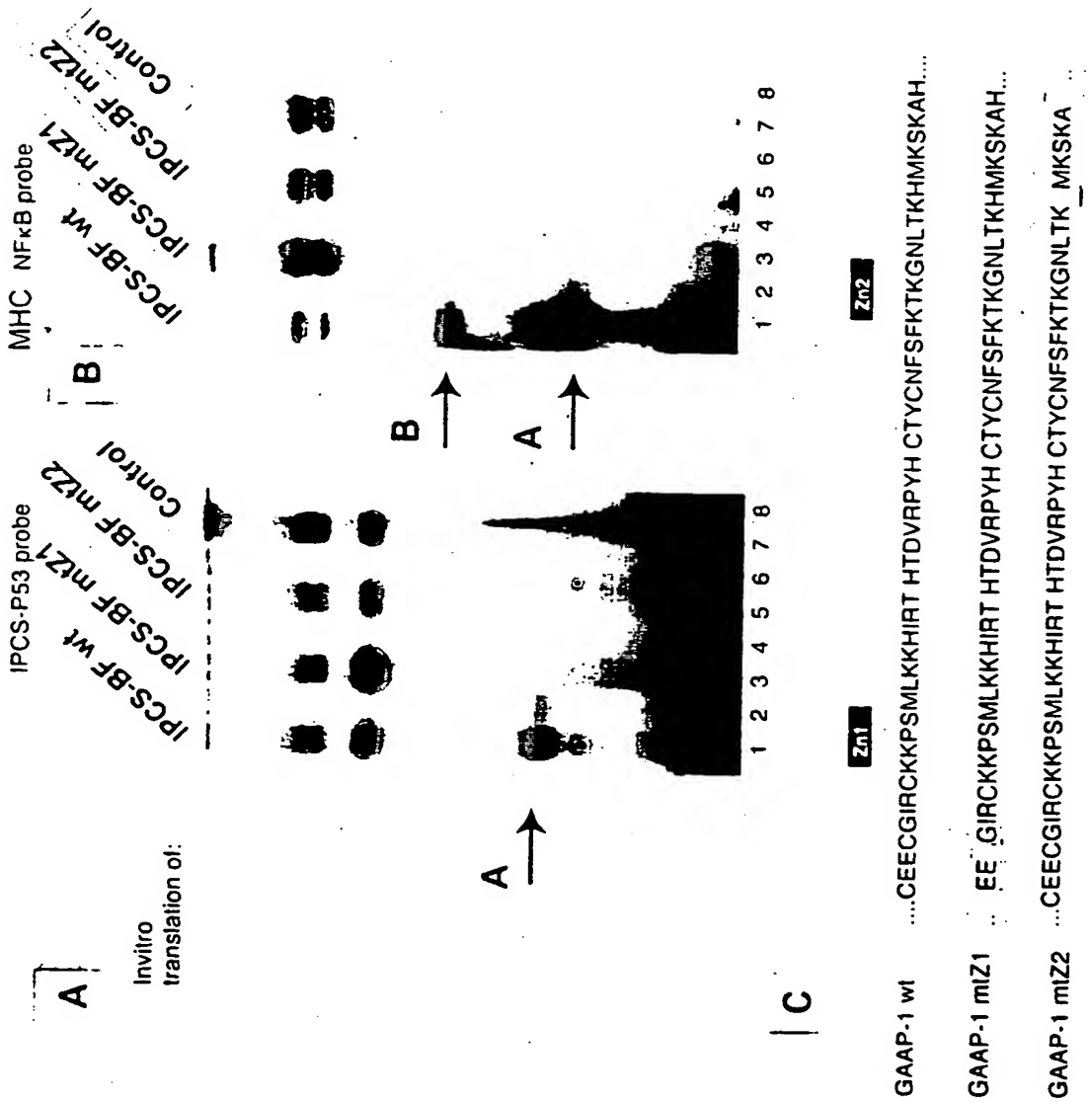


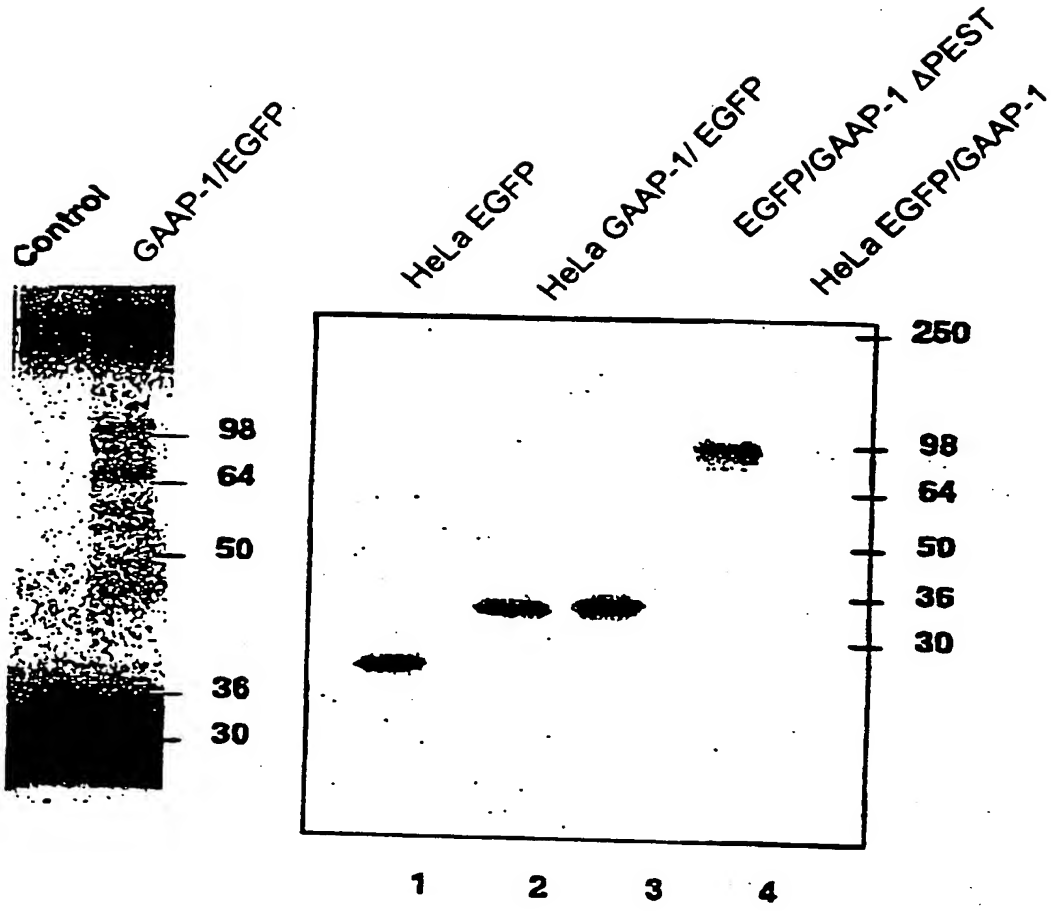
Figure 5

BEST AVAILABLE COPY

EGFP

EGFP

Figure 6



BEST AVAILABLE COPY

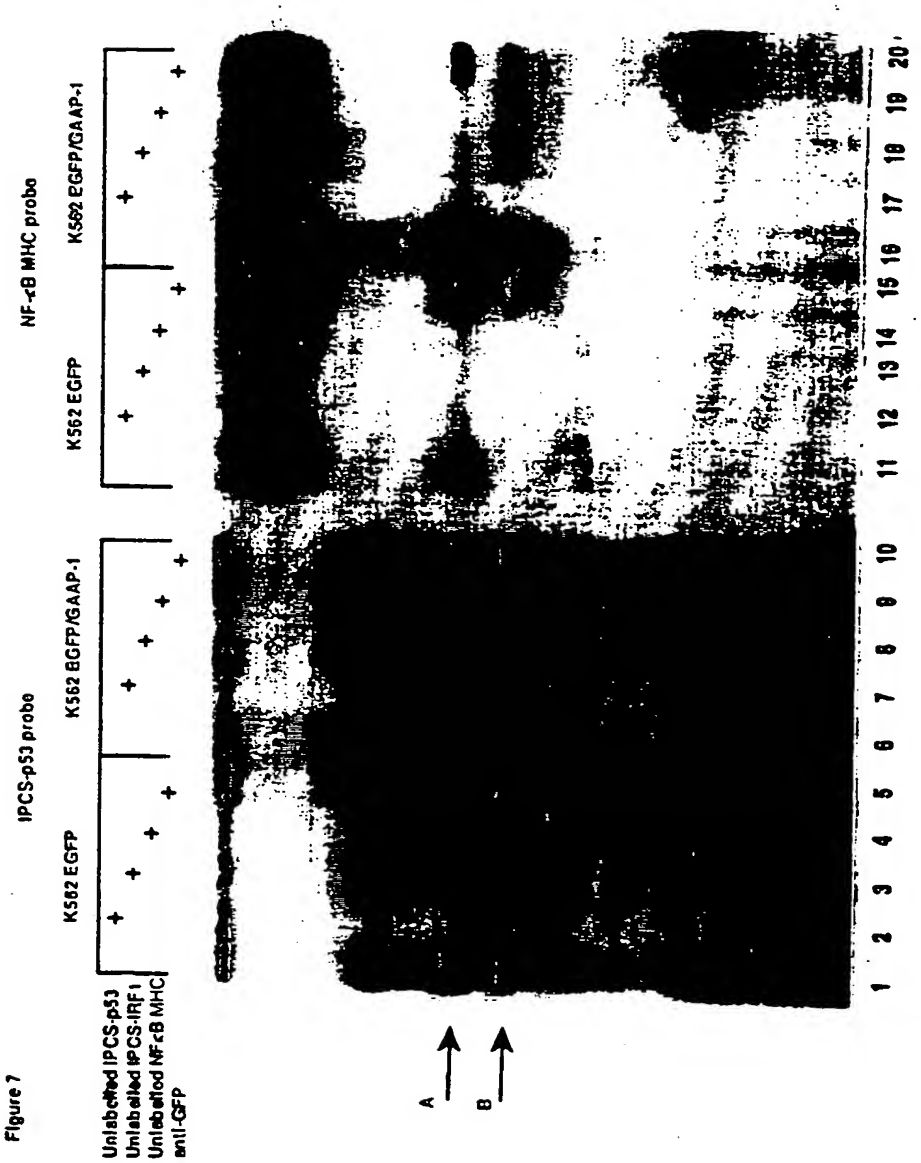
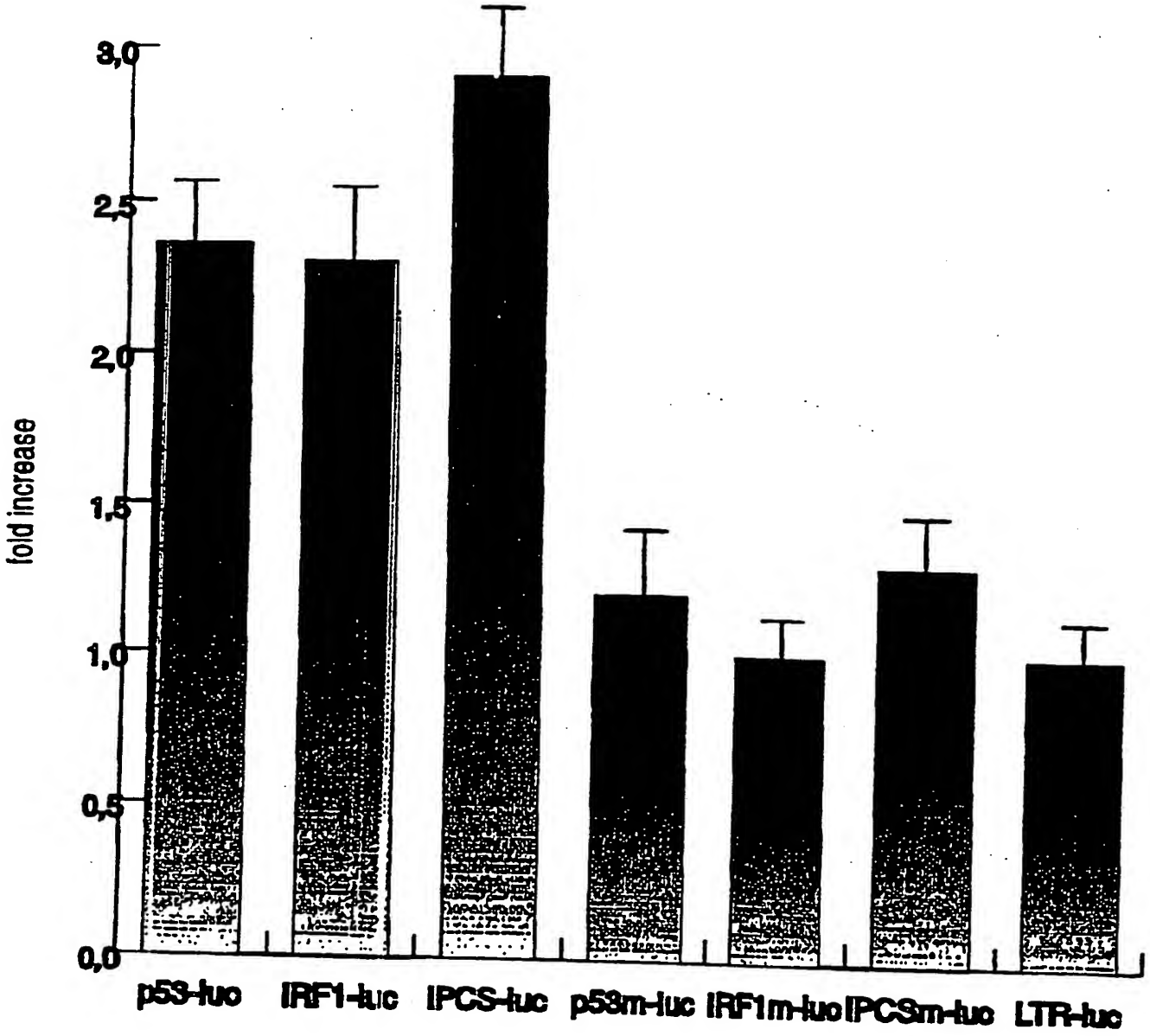


Figure 7

Figure 8

BEST AVAILABLE COPY



BEST AVAILABLE COPY

Figure 9

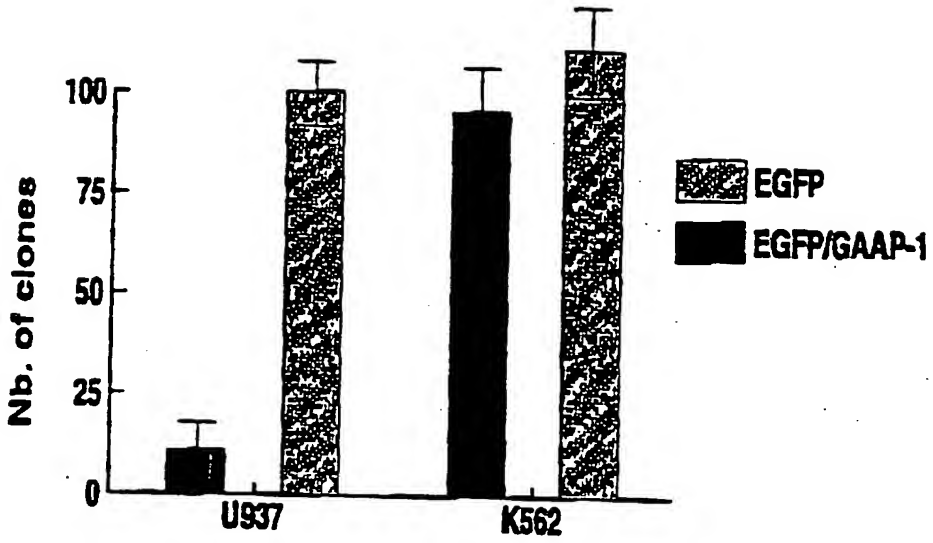
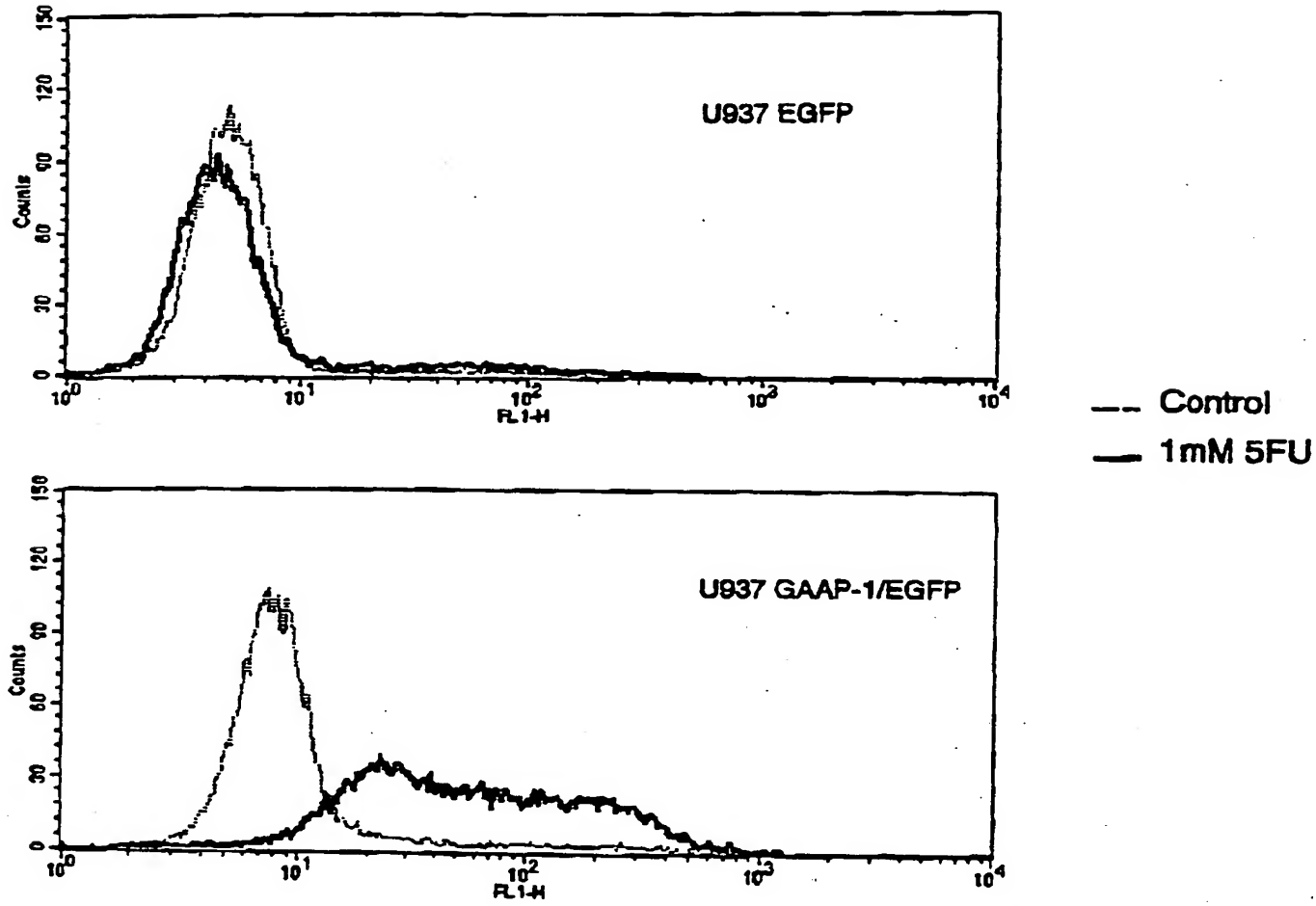


Figure 10


U937 EGFP
Counts
FL1-H
U937 GAAP-1/EGFP
Counts
FL1-H
Control
1mM 5FU

BEST AVAILABLE COPY

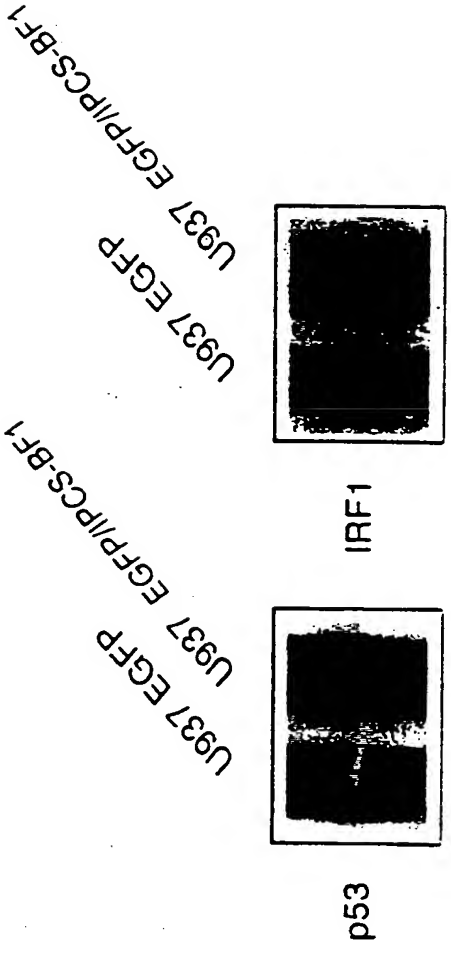
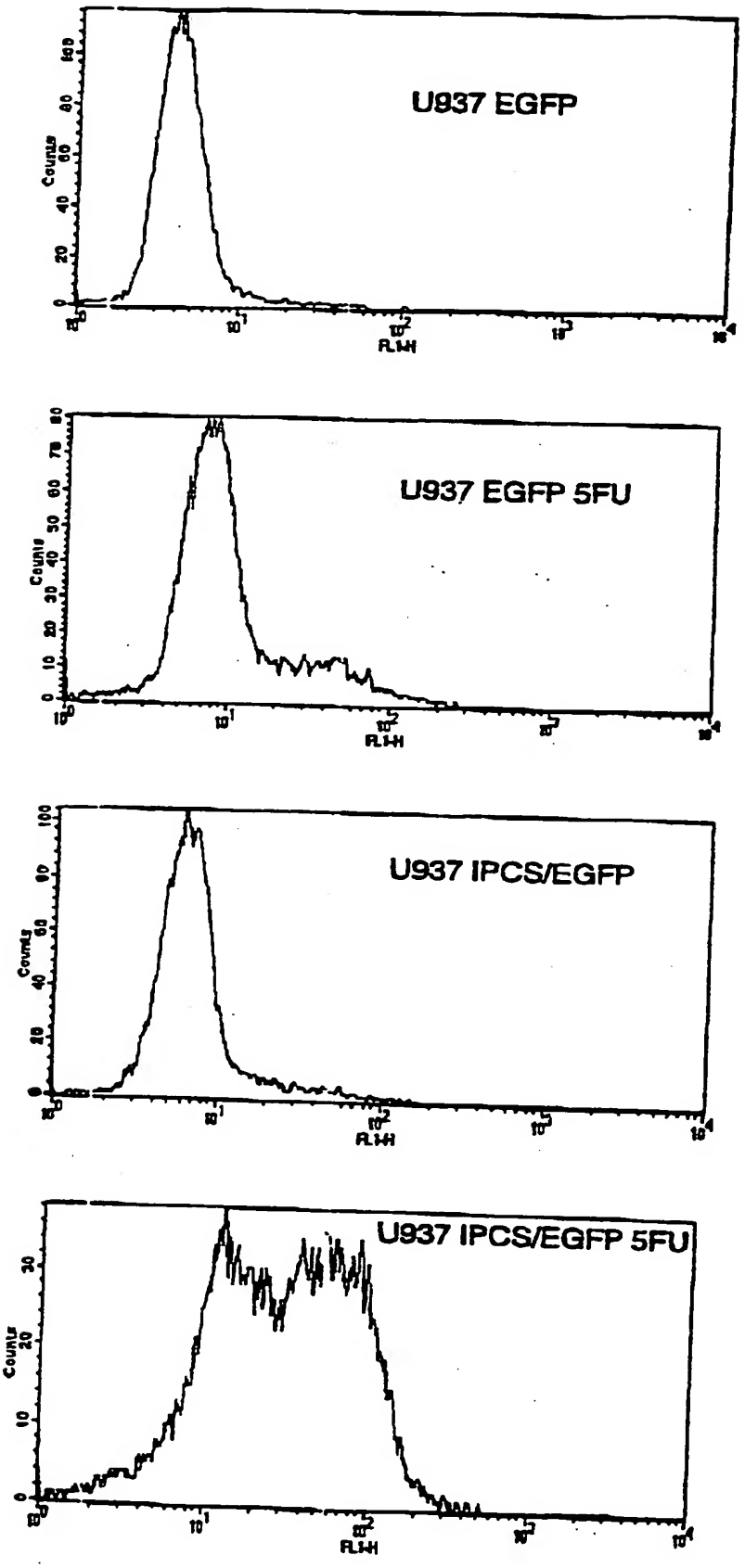


FIGURE 11

Figure 12


U937 EGFP
Counts
FL1-H
U937 EGFP 5FU
Counts
FL1-H
U937 IPCS/EGFP
Counts
FL1-H
U937 IPCS/EGFP 5FU
Counts
FL1-H

BEST AVAILABLE COPY

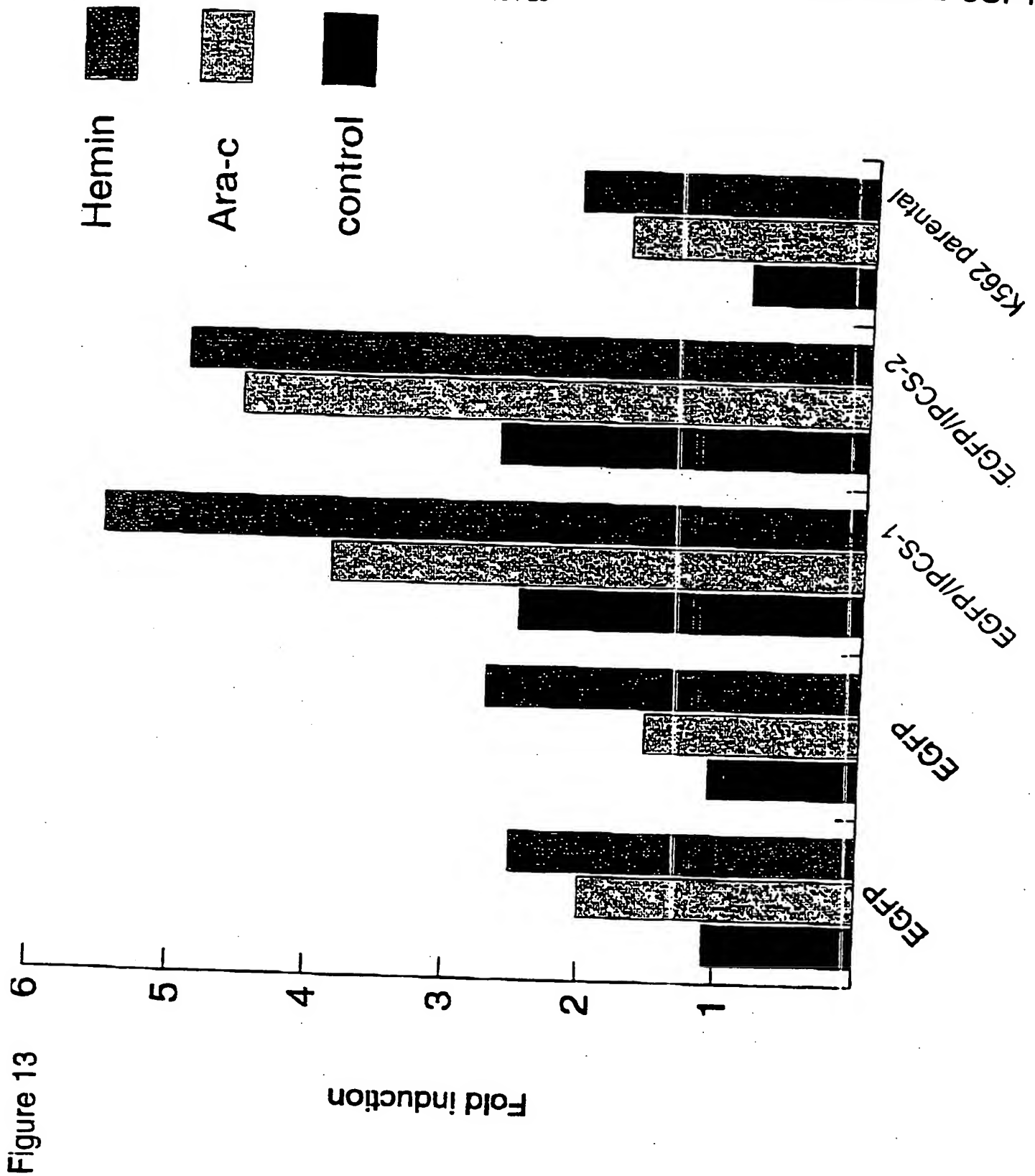


Figure 13

1 GAAP-1 CODING SEQUENCE – Seq. No. 1

BEST AVAILABLE COPY

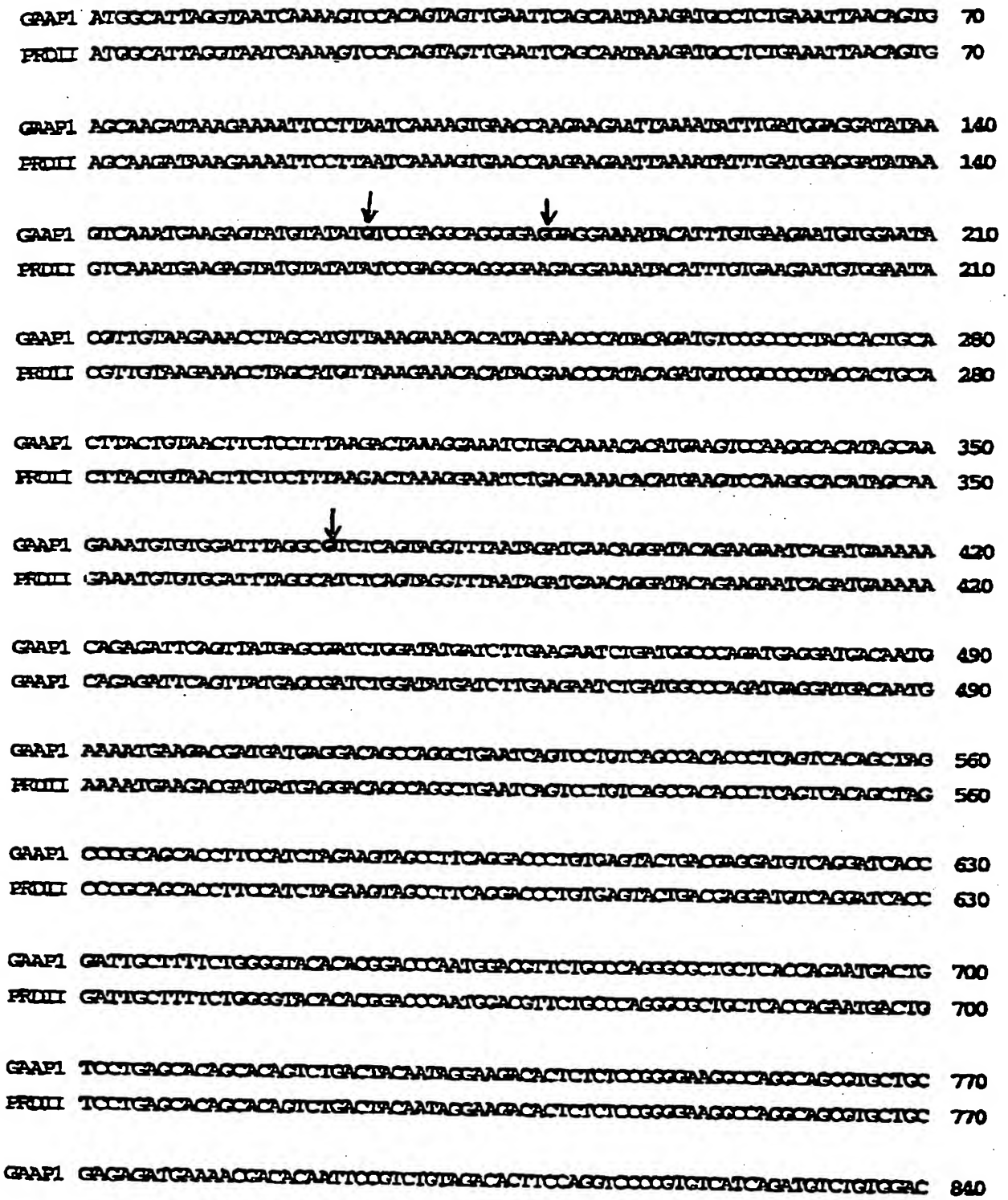


FIGURE 14A (a)

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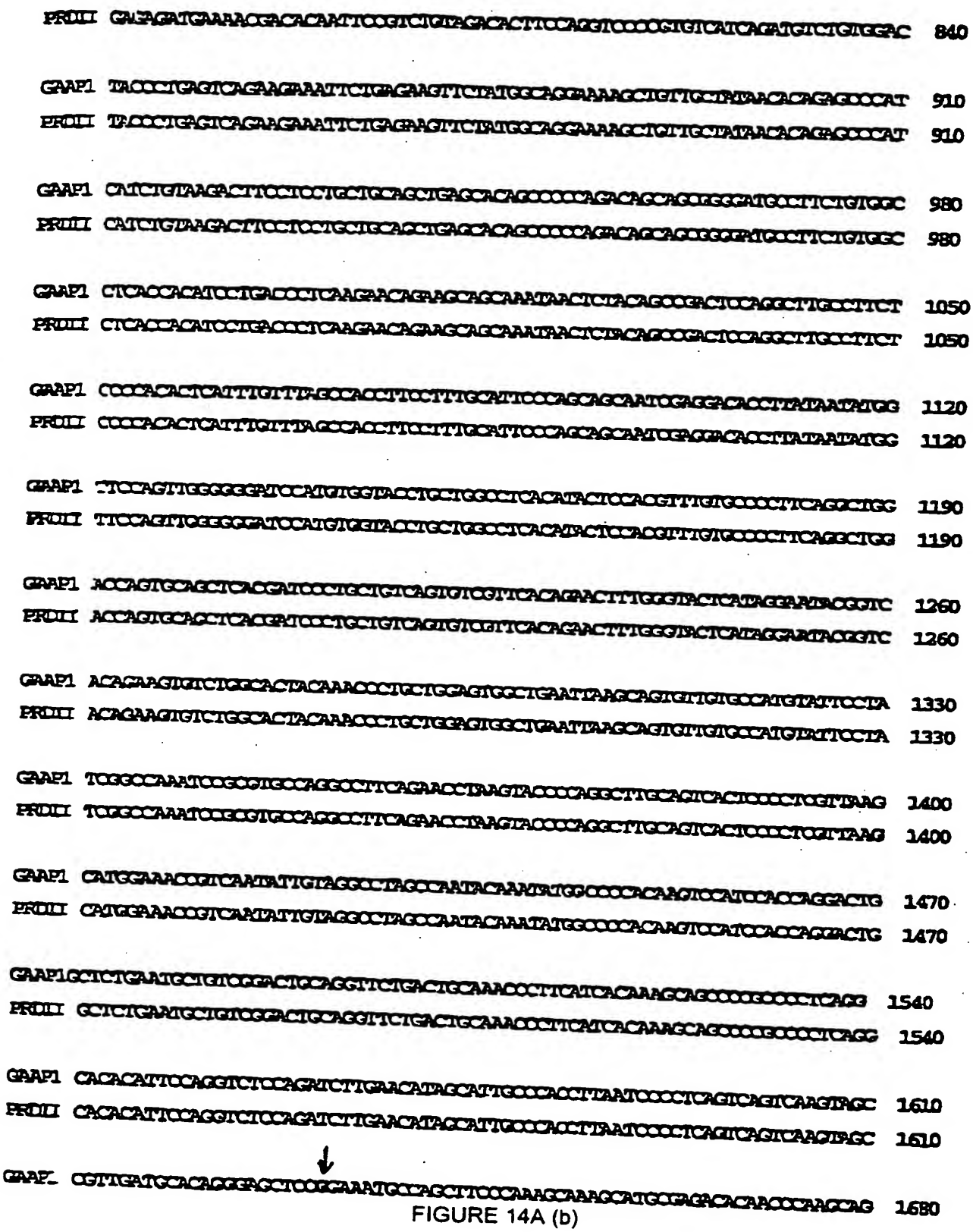

FIGURE 14A (b)

BEST AVAILABLE COPY

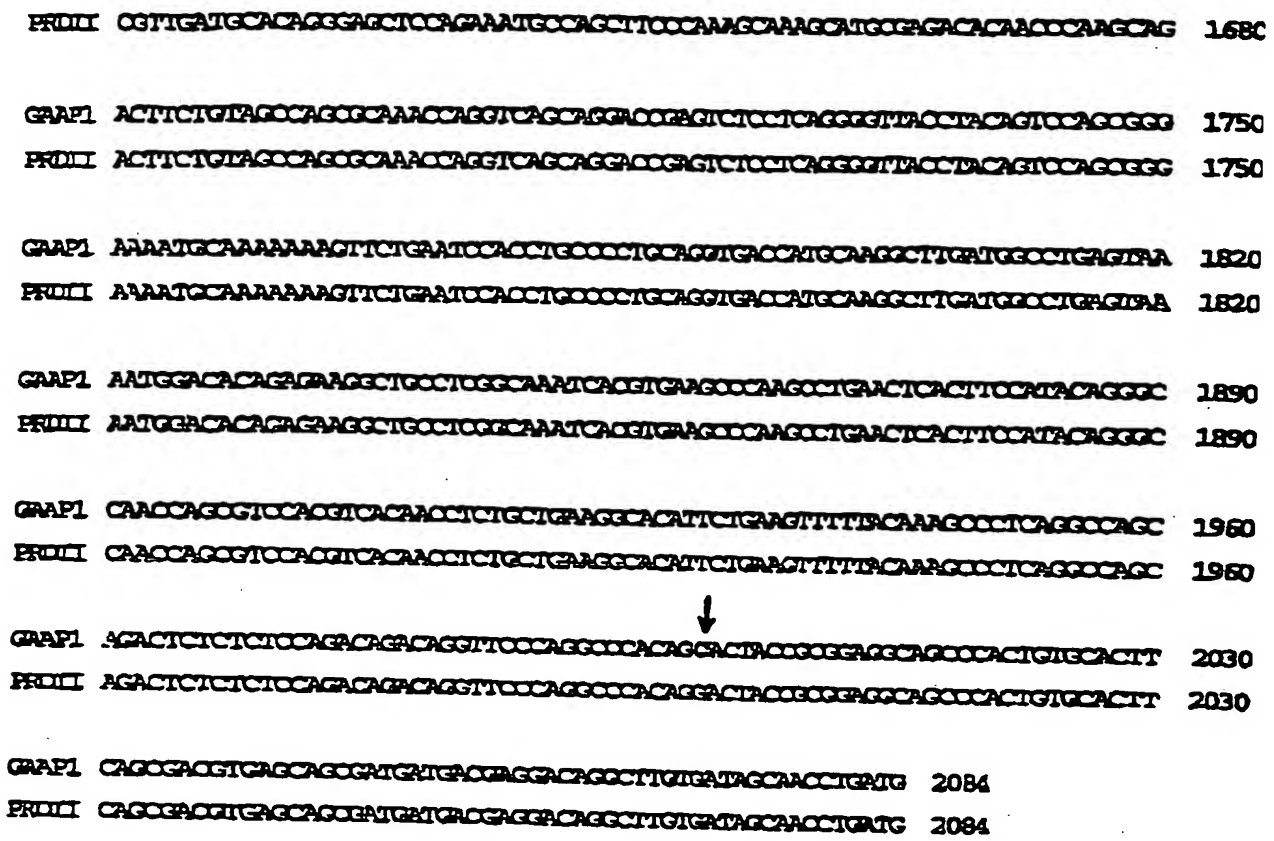

FIGURE 14A (c)

1 GAAP-1 CODING SEQUENCE

Seq No. 3

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ATGGGGCAGAAGTTTCAAAAAAAGAGA

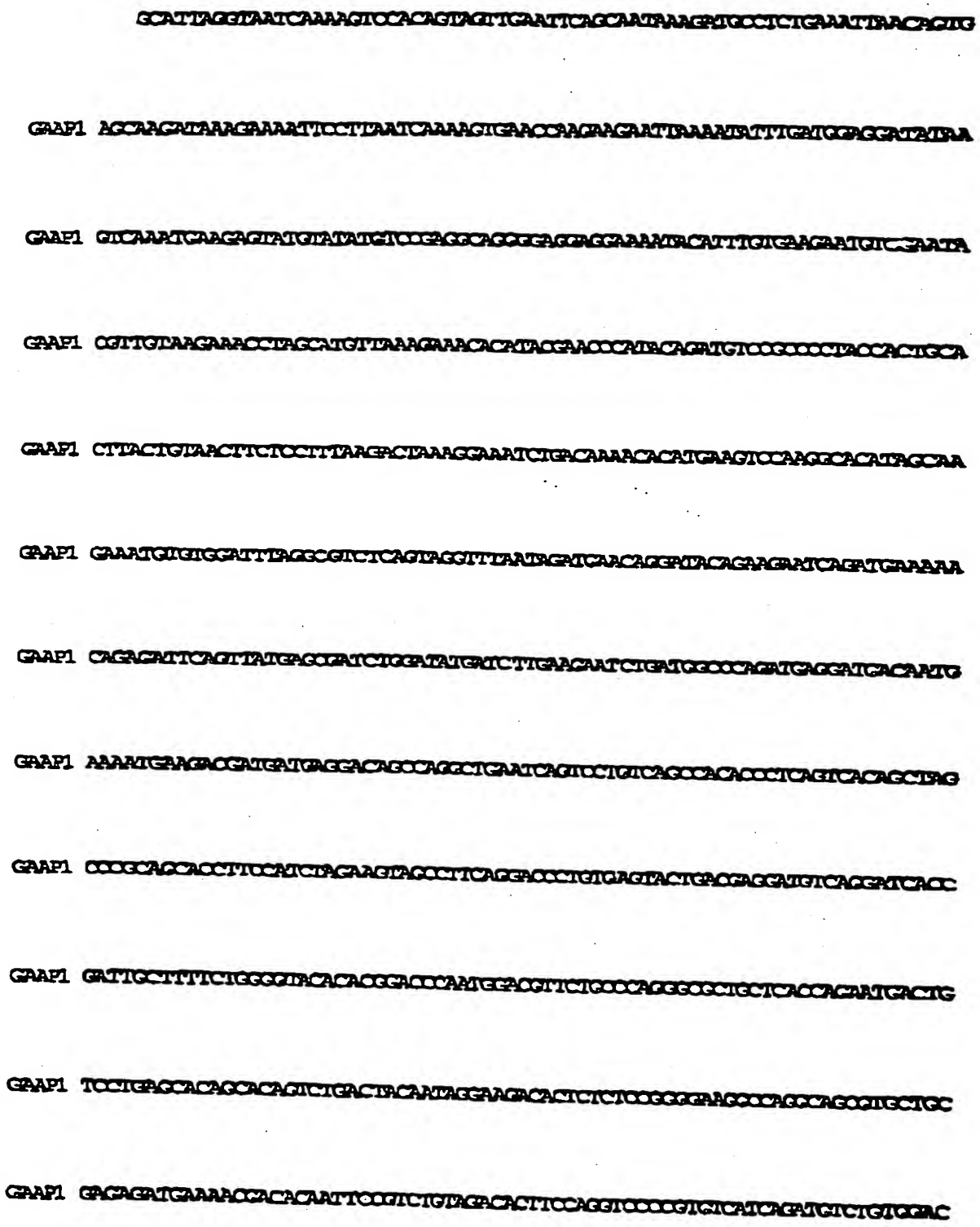

FIGURE 14B (a)

BEST AVAILABLE COPY

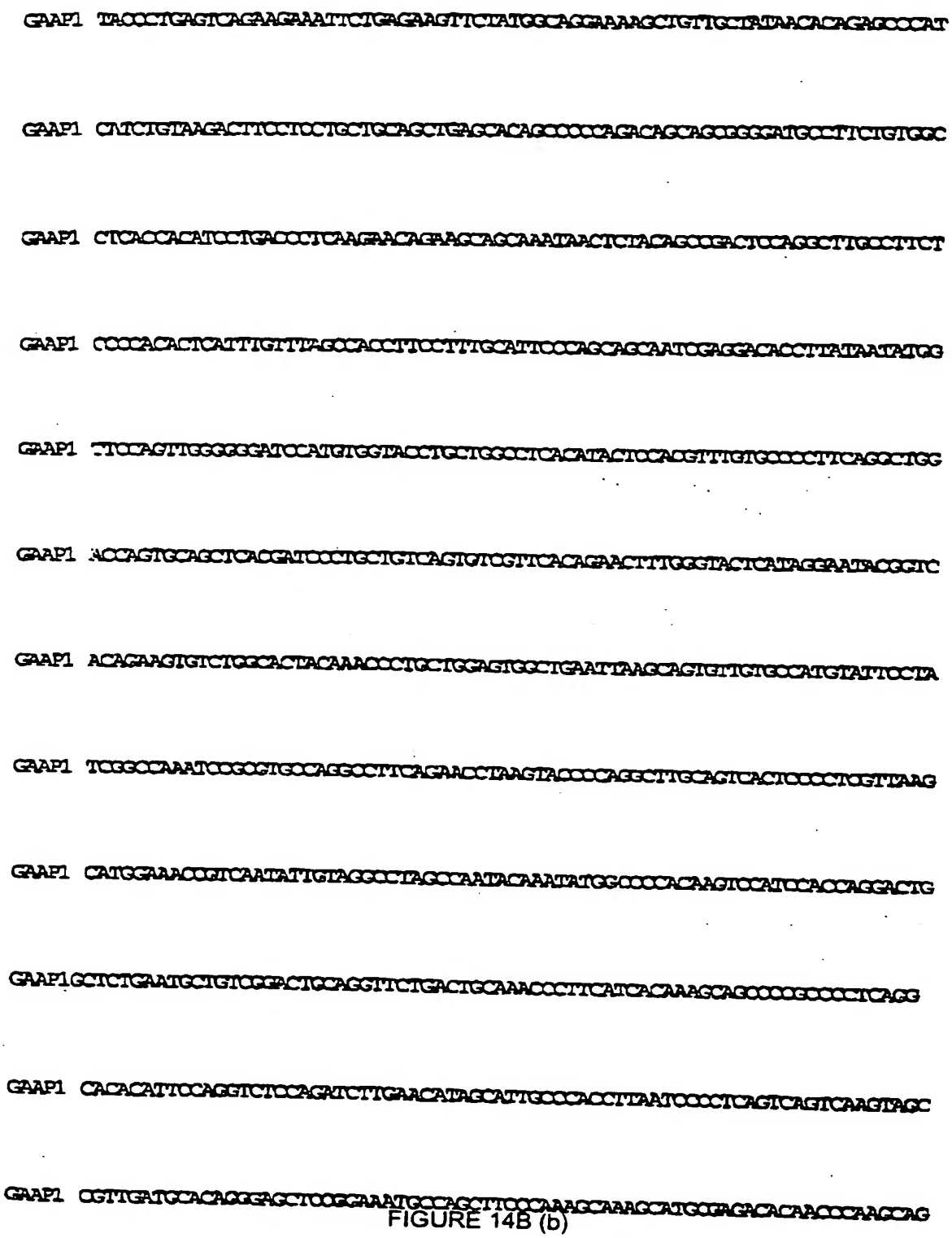

FIGURE 14B (b)

BEST AVAILABLE COPY

PRDII CGTTGATGCACAGGGAGCTCCAGAAATGCCAGCTTCCCAAAGCAAAGCATGCGAGACACAACCCAAGCAG

GAAP1 ACTTCTGTAGCCAGCGCAAACCAGGTCAGCAGGACCGAGTCTCCTCAGGGGTTACCTACAGTCCAGCGGG

GAAP1 AAAATGCAAAAAAAGTTCTGAATCCACCTGCCCCTGCAGGTGACCATGCAAGGCTTGATGGCCTGAGTAA

GAAP1 AATGGACACAGAGAAGGCTGCCTGGCAAATCACGTGAAGCCCAAGCCTGAACTCACTTCCATACAGGGC

GAAP1 CAACCAGCGTCCACGTCACAACCTCTGCTGAAGGCACATTCTGAAGTTTTTACAAAGCCCTCAGGCCAGC

GAAP1 AGACTCTCTCTCCAGACAGACAGGTTCCCAGGCCCACAGCACTACCGCGGAGCCAGCCCACTGTGCACTT

GAAP1 CAGCGACGTGAGCAGCGATGATGACGAGGACAGGCTTGTGATAGCAACCTGATG

FIGURE 14B (c)

GAAP-2 coding seq 22/28 Seq No. 5

```
   1  ATGGGGCAGA AGTTTCAAAA AAAGAAATCT TACAGGCTGG TGTTAAAGGA
      TACCCCGTCT TCAAAGTTTT TTTCTTTAGA ATGTCCGACC ACAATTTCCT
  51  ACTTCGGAAT CCCTTAAAGA GAGCATTAGG TAATCAAAAG TCCACAGTAG
      TGAAGCCTTA GGGAATTTCT CTCGTAATCC ATTAGTTTTC AGGTGTCATC
 101  TTGAATTCAG CAATAAAGAT GCCTCTGAAA TTAACAGTCA GCAAGATAAA
      AACTTAAGTC GTTATTTCTA CGGAGACTTT AATTGTCACT CGTTCTATTT
 151  GAAAATTCCT TAATCAAAAG TGAACCAAGA AGAATTAAAA TATTTGATGG
      CTTTTAAGGA ATTAGTTTTC ACTTGGTTCT TCTTAATTTT ATAAACTACC
 201  AGGATATAAG TCAAATGAAG AGTATGTATA TATCCGAGGC AGGGGAAGAG
      TCCTATATTC AGTTTACTTC TCATACATAT ATAGGCTCCG TCCCCTTCTC
 251  GAAAATACAT TTGTGAAGAA TGTGGAATAC GTTGTAAGAA ACCTAGCATG
      CTTTTATGTA AACACTTCTT ACACCTTATG CAACATTCTT TGGATCGTAC
 301  TTAAAGAAAC ACATACGAAC CCATACAGAT GTCCGCCCCT ACCACTGCAC
      AATTTCTTTG TGTATGCTTG GGTATGTCTA CAGGCGGGGA TGGTGACGTG
 351  TTACTGTAAC TTCTCCTTTA AGACTAAAGG AAATCTGACA AAACACATGA
      AATGACATTG AAGAGGAAAT TCTGATTTCC TTTAGACTGT TTTGTGTACT
 401  AGTCCAAGGC ACATAGCAAG AAATGTGTGG ATTTAGGCAT CTCAGTAGGT
      TCAGGTTCCG TGTATCGTTC TTTACACACC TAAATCCGTA GAGTCATCCA
 451  TTAATAGATG AACAGGATAC AGAAGAATCA GATGAAAAAC AGAGATTCAG
      AATTATCTAC TTGTCCTATG TCTTCTTAGT CTACTTTTTG TCTCTAAGTC
 501  TTATGAGCGA TCTGGATATG ATCTTGAAGA ATCTGATGGC CCAGATGAGG
      AATACTCGCT AGACCTATAC TAGAACTTCT TAGACTACCG GGTCTACTCC
 551  ATGACAATGA AAATGAAGAC GATGATGAGG ACAGCCAGGC TGAATCAGTC
      TACTGTTACT TTTACTTCTG CTACTACTCC TGTCGGTCCG ACTTAGTCAG
 601  CTGTCAGCCA CACCCTCAGT CACAGCTAGC CCGCAGCACC TTCCATCTAG
      GACAGTCGGT GTGGGAGTCA GTGTCGATCG GGCGTCGTGG AAGGTAGATC
 651  AAGTAGCCTT CAGGACCCTG TGAGTACTGA CGAGGATGTC AGGATCACCG
      TTCATCGGAA GTCCTGGGAC ACTCATGACT GCTCCTACAG TCCTAGTGGC
 701  ATTGCTTTTC TGGGGTACAC ACGGACCCAA TGGACGTTCT GCCCAGGGCG
      TAACGAAAAG ACCCCATGTG TGCCTGGGTT ACCTGCAAGA CGGGTCCCGC
 751  CTGCTCACCA GAATGACTGT CCTGAGCACA GCACAGTCTG ACTACAATAG
      GACGAGTGGT CTTACTGACA GGACTCGTGT CGTGTCAGAC TGATGTTATC
 801  GAAGACACTC TCTCCGGGGA AGGCCAGGCA GCGTGCTGCG AGAGATGAAA
      CTTCTGTGAG AGAGGCCCCT TCCGGTCCGT CGCACGACGC TCTCTACTTT
 851  ACGACACAAT TCCGTCTGTA GACACTTCCA GGTCCCCGTG TCATCAGATG
      TGCTGTGTTA AGGCAGACAT CTGTGAAGGT CCAGGGGCAC AGTAGTCTAC
 901  TCTGTGGACT ACCCTGAGTC AGAAGAAATT CTGAGAAGTT CTATGGCAGG
      AGACACCTGA TGGGACTCAG TCTTCTTTAA GACTCTTCAA GATACCGTCC
```

FIGURE 14C (a)

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```
 951  AAAAGCTGTT GCTATAACAC AGAGCCCATC ATCTGTAAGA CTTCCTCCTG
      TTTTCGACAA CGATATTGTG TCTCGGGTAG TAGACATTCT GAAGGAGGAC
-----------------------------------------------------------
1001  CTGCAGCTGA GCACAGCCCC CAGACAGCAG CGGGGATGCC TTCTGTGGCC
      GACCTCGACT CGTGTCGGGG GTCTGTCGTC GCCCCTACGG AAGACACCGG
-----------------------------------------------------------
1051  TCACCACATC CTGACCCTCA AGAACAGAAG CAGCAAATAA CTCTACAGCC
      AGTGGTGTAG GACTGGGAGT TCTTGTCTTC GTCGTTTATT GAGATGTCGG
-----------------------------------------------------------
1101  GACTCCAGGC TTGCCTTCTC CCCACACTCA TTTGTTTAGC CACCTTCCTT
      CTGAGGTCCG AACGGAAGAG GGGTGTGAGT AAACAAATCG GTGGAAGGAA
-----------------------------------------------------------
1151  TGCATTCCCA GCAGCAATCG AGGACACCTT ATAATATGCT TCCAGTTGGG
      ACGTAAGGGT CGTCGTTAGC TCCTGTGGAA TATTATACGA AGGTCAACCC
-----------------------------------------------------------
1201  GGGATCCATG TGGTACCTGC TGGCCTCACA TACTCCACGT TTGTGCCCCT
      CCCTAGGTAC ACCATGGACG ACCGGAGTGT ATGAGGTGCA AACACGGGGA
-----------------------------------------------------------
1251  TCAGGCTGGA CCAGTGCAGC TCACGATCCC TGCTGTCAGT GTCGTTCACA
      AGTCCGACCT GGTCACGTCG AGTGCTAGGG ACGACAGTCA CAGCAAGTGT
-----------------------------------------------------------
1301  GAACTTTGGG TACTCATAGG AATACGGTCA CAGAAGTGTC TGGCACTACA
      CTTGAAACCC ATGAGTATCC TTATGCCAGT GTCTTCACAG ACCGTGATGT
-----------------------------------------------------------
1351  AACCCTGCTG GAGTGGCTGA ATTAAGCAGT GTTGTGCCAT GTATTCCTAT
      TTGGGACGAC CTCACCGACT TAATTCGTCA CAACACGGTA CATAAGGATA
-----------------------------------------------------------
1401  CGGCCAAATC CGCGTGCCAG GCCTTCAGAA CCTAAGTACC CCAGGCTTGC
      GCCGGTTTAG GCGCACGGTC CGGAAGTCTT GGATTCATGG GGTCCGAACG
-----------------------------------------------------------
1451  AGTCACTCCC CTCGTTAAGC ATGGAAACCG TCAATATTGT AGGCCTAGCC
      TCAGTGAGGG GAGCAATTCG TACCTTTGGC AGTTATAACA TCCGGATCGG
-----------------------------------------------------------
1501  AATACAAATA TGGCCCCACA AGTCCATCCA CCAGGACTGG CTCTGAATGC
      TTATGTTTAT ACCGGGGTGT TCAGGTAGGT GGTCCTGACC GAGACTTACG
-----------------------------------------------------------
1551  TGTCGGACTG CAGGTTCTGA CTGCAAACCC TTCATCACAA AGCAGCCCCG
      ACAGCCTGAC GTCCAAGACT GACGTTTGGG AAGTAGTGTT TCGTCGGGGC
-----------------------------------------------------------
1601  CCCCTCAGGC ACACATTCCA GGTCTCCAGA TCTTGAACAT AGCATTGCCC
      GGGGAGTCCG TGTGTAAGGT CCAGAGGTCT AGAACTTGTA TCGTAACGGG
-----------------------------------------------------------
1651  ACCTTAATCC CCTCAGTCAG TCAAGTAGCC GTTGATGCAC AGGGAGCTCC
      TGGAATTAGG GGAGTCAGTC AGTTCATCGG CAACTACGTG TCCCTCGAGG
-----------------------------------------------------------
1701  AGAAATGCCA GCTTCCCAAA GCAAAGCATG CGAGACACAA CCCAAGCAGA
      TCTTTACGGT CGAAGGGTTT CGTTTCGTAC GCTCTGTGTT GGGTTCGTCT
-----------------------------------------------------------
1751  CTTCTGTAGC CAGCGCAAAC CAGGTCAGCA GGACCGAGTC TCCTCAGGGG
      GAAGACATCG GTCGCGTTTG GTCCAGTCGT CCTGGCTCAG AGGAGTCCCC
-----------------------------------------------------------
1801  TTACCTACAG TCCAGCGGGA AAATGCAAAA AAAGTTCTGA ATCCACCTGC
      AATGGATGTC AGGTCGCCCT TTTACGTTTT TTTCAAGACT TAGGTGGACG
-----------------------------------------------------------
1851  CCCTGCAGGT GACCATGCAA GGCTTGATGG CCTGAGTAAA ATGGACACAG
      GGGACGTCCA CTGGTACGTT CCGAACTACC GGACTCATTT TACCTGTGTC
-----------------------------------------------------------
```

FIGURE 14C (b)

```
1901  AGAAGGCTGC CTCGGCAAAT CACGTGAAGC CCAAGCCTGA ACTCACTTCC
      TCTTCCGACG GAGCCGTTTA GTGCACTTCG GGTTCGGACT TGAGTGAAGG
-------------------------------------------------------------------------------
1951  ATACAGGGCC AACCAGCGTC CACGTCACAA CCTCTGCTGA AGGCACATTC
      TATGTCCCGG TTGGTCGCAG GTGCAGTGTT GGAGACGACT TCCGTGTAAG
-------------------------------------------------------------------------------
2001  TGAAGTTTTT ACAAAGCCCT CAGGCCAGCA GACTCTCTCT CCAGACAGAC
      ACTTCAAAAA TGTTTCGGGA GTCCGGTCGT CTGAGAGAGA GGTCTGTCTG
-------------------------------------------------------------------------------
2051  AGGTTCCCAG GCCCACAGGA CTACCGCGGA GGCAGCCCAC TGTGCACTTC
      TCCAAGGGTC CGGGTGTCCT GATGGCGCCT CCGTCGGGTG ACACGTGAAG
-------------------------------------------------------------------------------
2101  AGCGACGTGA GCAGCGATGA TGACGAGGAC AGGCTTGTGA TAGCAACCTG
      TCGCTGCACT CGTCGCTACT ACTGCTCCTG TCCGAACACT ATCGTTGGAC
-------------------------------------------------------------------------------
2151  A
      T
-------------------------------------------------------------------------------
```

FIGURE 14C (c)

2 GAAP-1 POLYPEPTIDE Seq No 2

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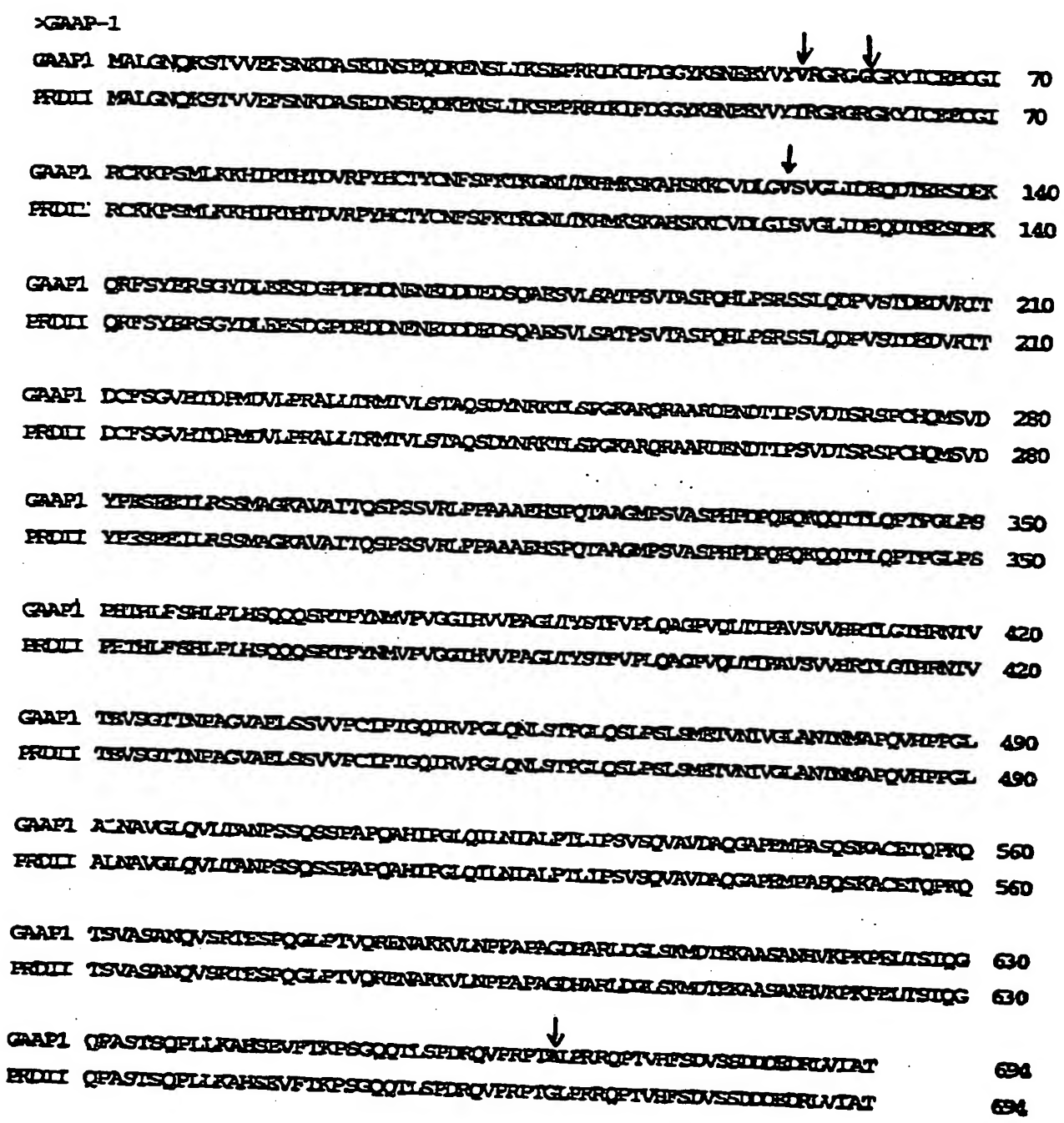

FIGURE 15 A

2 GAAP-1 POLYPEPTIDE Seq No 4 BEST AVAILABLE COPY

>GAAP-1

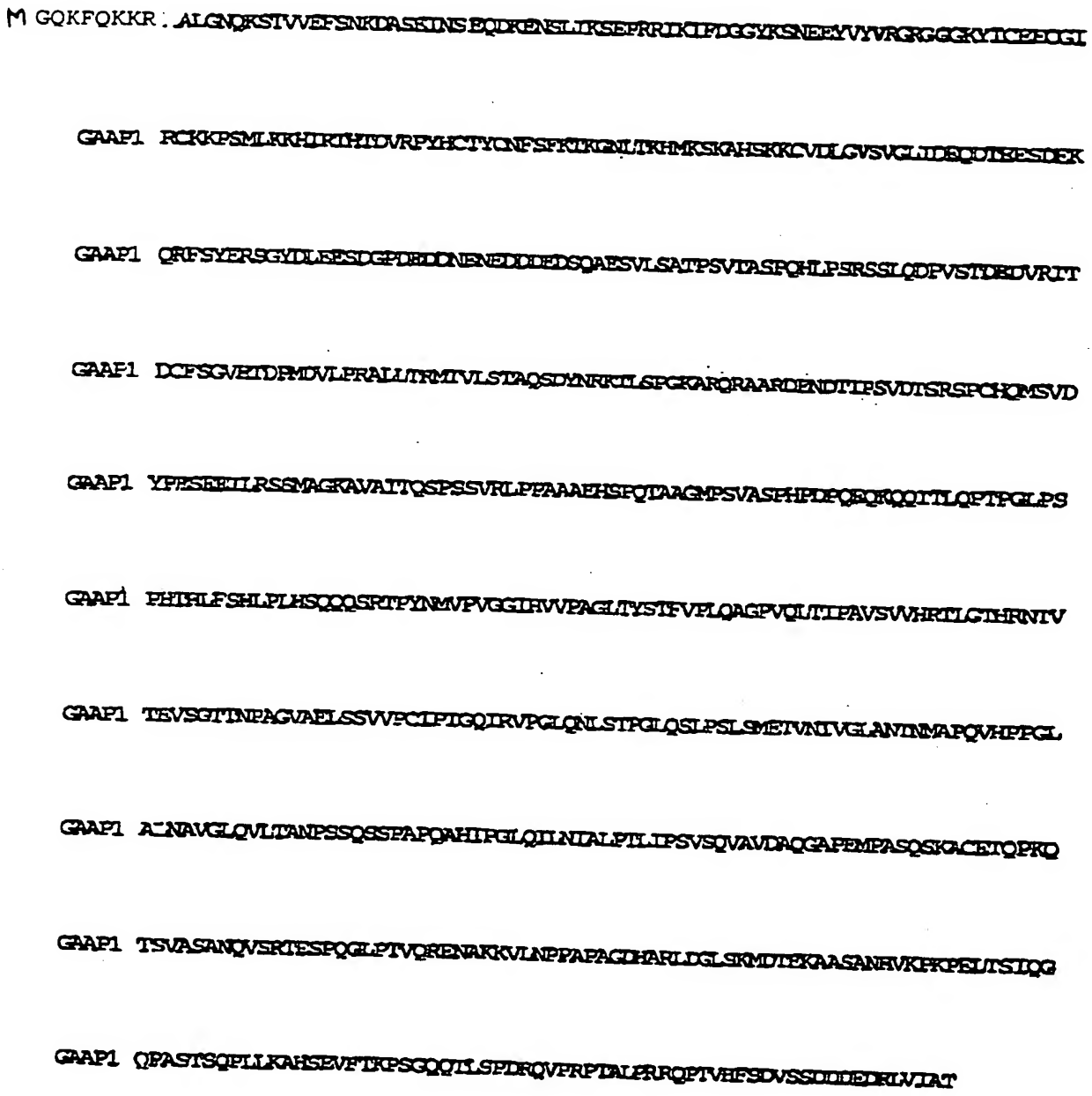

FIGURE 15 B

GAAP-2 - Seq No. 6.

```
  1  MGQKFQKKKS YRLVLKELRN PLKRALGNQK STVVEFSNKD ASEINSEQDK
 51  ENSLIKSEPR RIKIFDGGYK SNEEYVYIRG RGRGKYICEE CGIRCKKPSM
101  LKKHIRTHTD VRPYHCTYCN FSFKTKGNLT KHMKSKAHSK KCVDLGISVG
151  LIDEQDTEES DEKQRFSYER SGYDLEESDG PDEDDNENDD DDEDSQAESV
201  LSATPSVTAS PQHLPSRSSL QDPVSTDEDV RITDCFSGVH TDPMDVLPRA
251  LLTRMTVLST AQSDYNRKTL SPGKARQRAA RDENDTIPSV DTSRSPCHQM
301  SVDYPESEEI LRSSMAGKAV AITQSPSSVR LPPAAAEHSP QTAAGMPSVA
351  SPHPDPQEQK QQITLQPTPG LPSPHTHLFS HLPLHSQQQS RTPYNMVPVG
401  GIHVVPAGLT YSTFVPLQAG PVQLTIPAVS VVHRTLGTHR NTVTEVSGTT
451  NPAGVAELSS VVPCIPIGQI RVPGLQNLST PGLQSLPSLS METVNIVGLA
501  NTNMAPQVHP PGLALNAVGL QVLTANPSSQ SSPAPQAHIP GLQILNIALP
551  TLIPSVSQVA VDAQGAPEMP ASQSKACETQ PKQTSVASAN QVSRTESPQG
601  LPTVQRENAK KVLNPPAPAG DHARLDGLSK MDTEKAASAN RVKPKPELTS
651  IQGQPASTSQ PLLKAHSEVF TKPSGQQTLS PDRQVPRPTG LPRRQPTVHF
701  SDVSSDDDED RLVIAT
```

FIGURE 15 C

BEST AVAILABLE COPY
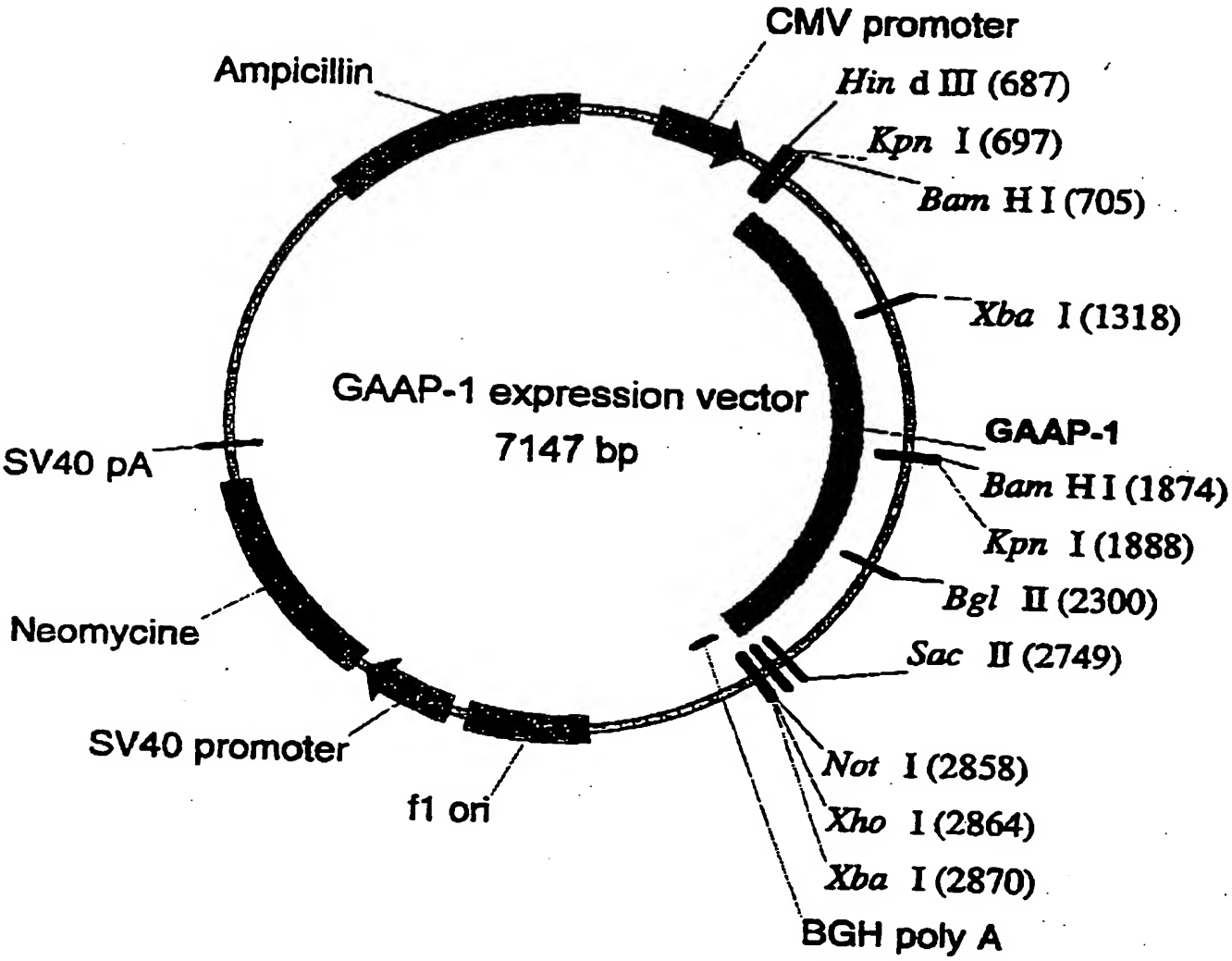
Figure 16